

INDEX - MICROFILM - REEL 219  
(Original designation Navy 5939-10)

1. Peroptan, a synthetic gasoline for aviation fuel, is the condensation product of n-propyl chloride with isobutane. The condensation is made in the presence of aluminum chloride and gives a branched, 7-carbon atom hydrocarbon for fuel purposes for air craft engines.

Peroptan is claimed to be made in 90 percent theoretical yield and to have an octane number of at least 98.

The propyl chloride used in the synthesis of peroptan is made from liquid chlorine and liquid propane in the presence of light.

Peroptan has a boiling range of 80 to 180<sup>o</sup> Centigrade.

Peroptan is said to be equal in octane reading to the gasoline produced by the alkylation process as practiced in Germany.

2. Preparation of di-n-ketone peroxide:
3. Graphite peroxide (C<sub>2</sub>O).
4. Conference on gas manufacturing in Ludwigshafen:
  - Dehydrogenation of n-butane.
  - Dehydrogenation of isobutane.
  - Catalyst preparation.
  - Butylene concentration.
  - Isomerization of n-butane.
  - Alkylation of isobutane with various olefins.
  - BF<sub>3</sub> and HF catalysts.
  - Alkylation of benzene.
  - Polymer gasolines.
5. Recovery of propylene by catalytic stepwise dehydrogenation of butane-propane mixtures.
6. Summary of a conference on gas manufacture at Leuna covering same topics as No. 4 above.
7. Isomerization of n-butane of alumina chloride.
8. series of papers on carbon monoxide hydrogen reaction to alcohols and carbons.
9. Experiments with iron catalysts for the Fischer-Tropsch reaction.

T.O.M. Reels 219

Reel 219 - Cont'd.

10. Method for the removal of fog, soot, and dust from gases.  
Patent memorandum for filter devices.
11. Research on GM and combustible insulating materials and  
explosiveness of GM with Iporka, Desmosit and T. Kohle.
12. An extensive survey of syntheses using acetylene as  
starting material.
13. Preparation of high anti-knock gasoline by the alkylation  
of isobutane with butene-1, pilot-scale plant.
14. Synthesis of fatty acid esters and fatty acids by the action  
of carbon monoxide with olefins and alcohols, and olefins  
and water.